

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 11

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WOJCIECH K. KANIEWSKI,
JENNIFER K. LODGE, and
NILGUN E. TUMER

Appeal No. 94-1569
Application 07/865,169¹

ON BRIEF

Before WINTERS and WILLIAM F. SMITH, Administrative Patent Judges, and
McKELVEY, Senior Administrative Patent Judge.

WILLIAM F. SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims
1 through 20, all the claims pending in the application.

¹ Application for patent filed April 7, 1992.

Claims 1, 8, 9, 16, and 17 are the independent claims pending in this application and read as follows:

1. A potato plant comprising a heterologous gene capable of causing the expression of a pokeweed antiviral protein in said plant at a level sufficient to render said plant resistant to infection by a virus selected from the group consisting of potato virus X and potato virus Y.

8. A potato plant comprising a heterologous gene capable of causing the expression of a pokeweed antiviral protein and the translocation of said protein to the cell walls or vacuoles of said plant, said protein expressed at a level sufficient to render said plant resistant to infection by a virus selected from the group consisting of potato virus X and potato virus Y.

9. A potato tuber comprising a heterologous gene capable of causing the expression of a pokeweed antiviral protein in said tuber at a level sufficient to render said tuber resistant to infection by a virus selected from the group consisting of potato virus X and potato virus Y.

16. DNA sequence encoding SEQ ID NO:2.

17. A method for providing viral resistance to infection by a virus selected from the group consisting of potato virus X and potato virus Y in a potato plant or tuber comprising causing the expression of a pokeweed antiviral protein in said plant or tuber.

The references relied upon by the examiner are:

Ready et al. (Ready), "Extracellular Localization of Pokeweed Antiviral Protein," Proceedings of the National Academy of Sciences, Vol. 83, pp. 5053-56 (1986)
Stockhaus et al. (Stockhaus), "Analysis of Cis-Active Sequences Involved in the Leaf-Specific Expression of a Potato Gene in Transgenic Plants," Proceedings of the National Academy of Sciences, Vol. 84, pp. 7943-47 (1987)

Twell et al. (Twell), "The 5' Flanking DNA of a Patatin Gene Directs Tuber Specific Expression of a Chimaeric Gene in Potato," Plant Molecular Biology, Vol. 9, pp. 345-75 (1987)

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Bevan et al. (Bevan), "Tissue- and Cell-Specific Activity of a Phenylalanine Ammonia-Lyase Promoter in Transgenic Plants," The EMBO Journal, Vol. 8, No. 7, pp. 1899-1906 (1989)

Lawson et al. (Lawson), "Engineering Resistance to Mixed Virus Infection in a Commercial Potato Cultivar: Resistance to Potato Virus X and Potato Virus Y in Transgenic Russet Burbank," Bio/Technology, vol. 8, pp. 127-34 (1990)

Lodge et al. (Lodge), "Characterization and Cloning of the Pokeweed Antiviral Protein," Journal of Cellular Biochemistry, Supplement Vol. 14E, p. 304 (1990)

Claims 1, 2, 4, 6 through 10, 12, and 14 through 20 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies upon Lawson, Lodge, and Ready. Claims 3, 5, 11 and 13 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies upon the three aforementioned references as well as Stockhaus, Twell, and Bevan. We reverse.²

Discussion

All of the claims on appeal require the presence of a gene which will cause the "expression of a pokeweed antiviral protein." The DNA sequence and coding SEQ ID NO:2 set forth in claim 16 on appeal is a specific example of such a gene.

It is the initial burden of the patent examiner to establish that claims presented in an application for patent are unpatentable. In re Oetiker, 977 F.2d 1443, 1446,

² A separate rejection of claims 3, 5, 8, 11, and 13 under 35 U.S.C. § 112, first paragraph, was subsequently withdrawn by the examiner. See the Office communication issued December 8, 1998 (Paper No. 10).

24 USPQ2d 1443, 1445 (Fed. Cir. 1992). A rejection under 35 U.S.C. § 103 must be premised upon the "subject matter as a whole." 35 U.S.C. § 103(a). Focussing on that portion of the subject matter as a whole which requires the presence of a gene capable of expressing a pokeweed antiviral protein (PAP), we find that the examiner determined in the first sentence of the Examiner's Answer that Lodge discloses "isolation of a cDNA clone encoding a PAP polypeptide." The examiner further determined at page 7 of the Examiner's Answer that Lodge discloses a "PAP-encoding cDNA."

The Lodge reference is in actuality an abstract of a presentation given at a symposium. In relevant part, the abstract only reports that Lodge "isolated a cDNA clone" of a PAP. The abstract does not give any details as to the nucleotide sequence of the cDNA clone. Nor does the abstract give any details as to the manner in which the cDNA clone was identified and isolated so that one of ordinary skill in the art could independently obtain the discussed clone. In other words, Lodge does not describe a specific cDNA clone encoding a PAP. Rather, all that Lodge describes is the authors' announcement of their success in identifying such a clone.

The examiner's rejection of the claims on appeal under 35 U.S.C. § 103 is fatally defective since it does not properly account for and establish the obviousness of the subject matter as a whole. None of the references relied upon by the examiner describe a nucleotide sequence encoding a PAP. Rather, Lodge only describes the authors' success in identifying and isolating such a nucleotide sequence. The examiner has not established

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on this record that Lodge in and of itself or in conjunction with any of the other applied prior art enables one skilled in the art to identify and isolate that aspect of the claimed invention which involves a gene capable of causing the expression of a pokeweed antiviral protein.

The decision of the examiner is reversed.

REVERSED

SHERMAN D. WINTERS
Administrative Patent Judge

WILLIAM F. SMITH
Administrative Patent Judge

FRED E. McKELVEY, Senior
Administrative Patent Judge

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